

REMARKS

The Office Action mailed July 28, 2004 has been received and reviewed. Claims 9-14, 17-22, 24, 25 and 28-30 are pending and are rejected. Claims 9, 12, 17, 20, 21 and 24 are amended. Claims 28 is cancelled. The Applicants submit that the claims are now in condition for allowance for the reasons stated hereinafter.

Rejection Of Claims 9, 12-14, 17-20, 22, 24 and 28-30 Under 35 U.S.C. § 103

Claims 9, 12-14, 17-20, 22, 24 and 28-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brooks (USP 3,896,532) in view of Lyon (USP 5,100,269). The Examiner states that Brooks discloses a tool holder with a triangular-shaped insert and other elements required by claims 9, 12, 14, 18-20, 22 and 30, but that Brooks fails to teach a linear groove as claimed. The Examiner states that Lyon teaches a similar cutter device having an insert with a linear groove extending parallel to a rear surface of the insert in combination with a clamping plate. The Examiner states that it would have been obvious to one of skill in the art to modify the clamping hole of Brooks with the linear groove and clamping arm of Lyon since Lyon teaches the arrangement to assist in accurately placing the insert in the holder in a repeatable manner. The rejection is overcome by clarifying amendment.

As amended, claims 9 and 24 require a triangular shaped blade plate having a continuous linear groove extending between adjacent sides of the triangular shape and parallel to the (first) edge of the triangular shape opposition the cutter, the linear groove being oriented parallel to a longitudinal axis of rotation of the base body or defined directional rotational axis of the blade plate. While Brooks teaches a triangular shaped cutting element, Brooks neither teaches nor suggests providing the blade plate with a linear groove for receiving a clamping lip for stabilizing the blade plate (i.e., to reduce or eliminate chatter). Lyon, while teaching a groove formed in a cutting element, does not teach orienting the linear groove parallel to a longitudinal axis or axis of rotation for stabilizing the blade plate as claimed. Lyon discloses a groove that is oriented perpendicular to the long axis of the tool. To establish a *prima facie* case of

obviousness, there must be some suggestion or motivation in the references or general skill to modify or combine the references and there must be a reasonable expectation of success. MPEP § 706.02(j). Brooks identifies that chatter is a problem in cutting elements, but addresses the problem by providing a cutter insert having a central hole and a clamping element that is attached to the tool body by a screw and pins to stabilize the cutter insert and, presumably, reduce chatter. Nothing in Brooks suggests forming the cutter insert with a groove for receiving a clamping lip as claimed, and Brooks certainly does not teach or suggest that the elements for stabilizing the cutter insert are oriented parallel to the axis of rotation. Lyon, while teaching a linear groove of sorts, does not teach or suggest orienting the linear groove parallel to the longitudinal axis of the tool or of rotation to stabilize the blade plate in operation. Lyon discloses the opposite arrangement, namely orienting the groove perpendicularly to the long axis of the tool. Additionally, neither Brooks nor Lyon teach that the linear groove lies within an incircle of the blade plate or cutter insert as recited in claims 9 and 24. The prior art reference or references when combined must teach or suggest all the claim limitations. MPEP § 706.02(j). Therefore, even if Brooks and Lyons were combinable, which the Applicants assert they are not, neither reference teaches orienting the linear groove parallel to an axis of rotation for stabilizing the blade plate as claimed and nothing in either reference consequently suggests or implies any reasonable expectation of success for such an arrangement, or teaches or suggests all that is recited by claims 9 and 24 and the claims that depend therefrom.

Claim 17 and claim 24 are also amended to clarify that the clamping lug has two non-parallel sides which contact and engage the body of the tool to stabilize the clamping lug, and thereby stabilize the blade plate, which is not disclosed by either reference.

For the same reasons as noted immediately above, amended claim 20 which recites a blade plate having a linear groove oriented parallel to an axis of rotation of the base body of the tool is not obviated by Brooks and Lyon.

Rejection Of Claims 10, 11 and 25 Under 35 U.S.C. § 103(a)

Claims 10, 11 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Brooks in view of Lyon and further in view of Minshall. The Examiner states that Brooks, as modified by Lyon, discloses all of the elements as set forth in the above rejection, but that Lyon is silent with respect to a teaching of an angle of an edge of the linear groove. The Examiner states, however, that Minshall discloses a cutting insert having a groove with an angle of approximately 10° and that it would be obvious to modify Lyon accordingly. The rejection is overcome by clarifying amendment of the claims.

As noted previously, neither Brooks nor Lyon teach or suggest the combination as asserted by the Examiner, and neither teaches or suggests any reasonable expectation of success, nor teaches all of the claim limitations as required to establish a *prima facie* case of obviousness. Therefore, even if Minshall were considered to teach a linear groove as claimed, the claims would still not be obviated by the references alone or in combination. Additionally, however, Minshall specifically illustrates in FIG. 4 and states in column 3, line 12, that the angle of the inclined walls of the groove are 7° to the flat front surface, an angle which is outside the claimed range. Minshall, in effect, teaches away from that which is claimed. Therefore, claims 10, 11, and 25 are not obviated by the references alone or in combination.

Rejection Of Claim 21 Under 35 U.S.C. § 103(a)

Claim 21 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Brooks in view of Lyon and further in view of Sorice. The Examiner states that Brooks and Lyon disclose all of the elements as set forth in prior rejections, but fail to disclose the use of a shim in the cutting tool, which, the Examiner states, is taught by Sorice. The Examiner states that it would have been obvious to modify the holder of Brooks in view of Lyon and include the shim as taught by Sorice since it is inherent that a shim can be used to supply a holder with a replaceable seating surface. The rejection is overcome by clarifying amendment of claims 20 and claim 21. For the reasons stated

above, Brooks and Lyon cannot be combined as suggested to obviate claim 21 since the references do not teach or suggest such combination, do not suggest a reasonable expectation of success from any presumed combination, and do not teach all the limitations of the claim as required for making a *prima facie* case of obviousness. Additionally, amended claim 21 requires a spacer being adapted to the shape of the blade plate, but being sized in dimension such that the cutter extends radially beyond the spacer, as shown in FIG. 3 of the specification. Sorice does not provide any such disclosure, the shim of Sorice being apparently sized and/or dimensioned to the exact contour, size and dimension of the cutting element (18). Therefore, neither Brooks, Lyon nor Sorice obviate claim 21.

CONCLUSION

In view of the amendments made and arguments presented, the Applicants submit that claims 9-14, 17-22, 24, 25 and 29-30 present patentable subject matter. Reconsideration and allowance are respectfully requested.

Respectfully submitted,



Julie K. Morris
Registration No. 33,263
Attorney for Applicants
MORRISS O'BRYANT COMPAGNI, P.C.
136 South Main Street, Suite 700
Salt Lake City, Utah 84101
Telephone: (801) 478-0071
Facsimile: (801) 478-0076

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